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Amd. Dated June 30, 2005
Reply to Office Action of June 1, 2005

REMARKS/ARGUMENTS

Reconsideration of the rejections set forth in the Office Action dated June 1, 2005 is respectfully requested. Claims 1-21, 22-33, and 35-42 have been rejected. Claims 43-45 have been added. Claims 23, 31, and 35 have been cancelled. Therefore, claims 1-21, 22, 24-30, 32, 33, and 36-45 are currently pending.

Claims 1, 16, 21, 32, and 33 have been amended. Claims 1 and 21 have been amended to overcome the Examiner's objections. Claim 16 has been amended to recite that a second segment is generated after a first segment is generated. Support for this amendment may be found in the Specification, as for example from page 9 at line 15 to page 10 at line 24. Claim 21 has been amended to include the limitations of now-cancelled claim 23, and claim 33 has been amended to include the limitations of now-cancelled claim 35. In light of the amendment to claim 21 and the cancellation of claim 23, claim 24 as been amended to depend from claim 21. Claim 32 has been amended, in light of the cancellation of claim 31, to depend from claim 30.

New claim 43 recites that a second segment of a path is computed after the first segment of the path is computed. Support for this new claim may be found in the Specification, as for example on page 12 at lines 5-27. New claims 44 and 45 recite that blocking a second element from being available for use in routing a first segment automatically includes placing the second element in a list of elements that are arranged to be eliminated from consideration in routing the first segment. Support for these new claims may be found, for example, on page 9 of the Specification, at lines 27-29.

Claim Objections

Claims 6, 21, and 30 were objected to by the Examiner for informalities. The Applicants have amended claims 6, 21, and 30 in a sincere effort to overcome the Examiner's objections. Claim 6 has been amended to add in text that was removed via a previous amendment, and is

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now believed to be clear. Claim 21 has been amended to correct a typographical error. Claim 30 has not been amended, as the Applicants believe claim 30 is clear. The second segment is intended to contain a first link, as recited in claim 30. Claim 29 recites that a first segment is routed from a source node to an initial node of a first link, and does not recite that the first link "belongs to" the first segment, as indicated by the Examiner on page 2 of the Office Action dated June 1, 2005. Hence, claim 30 recites that a first link is contained in a second segment, while claim 29 recites that a first segment is routed to an initial node of the first link. It is respectfully submitted that claim 30 is consistent with claim 29. As such, it is believed that claim 30 does not need to be modified.

Rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103

Claims 1-7, 10-13, 16, 17, and 20 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Finn (U.S. Patent No. 6,728,205), herein after "Finn." Claims 8, 9, 14, 15, 18, 19, 21, 22-33, and 35-42 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Finn in view of Doshi (U.S. Patent No. 6,073,248), herein after "Doshi."

1.   Independent claims 1, 10, and their respective dependents

Among other features, claim 1 recites that a first segment of a path is computed while a fourth element is blocked from being included in the first segment such that the path traverses the fourth element in a second segment of the path computed while the third element is blocked from being included in the second segment. The path traverses the third element in the first segment. Hence, the device of claim 1 creates a path with a first segment that includes a third element and a second segment that includes a fourth element. The third element is blocked from being included in the second segment, and the fourth element is blocked from being included in the first segment.

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     Claim 1 teaches that both a third element and a fourth element are to be included in a path. However, to include both the third element and the fourth element, the fourth element is blocked from being included in a first segment that includes the third element, and the third element is blocked from being included in a second segment that includes the fourth element.

     It is respectfully submitted that contrary to the Examiner's assertions in the Office Action dated June 1, 2005, Finn does not teach these features of claim 1. At lines 50-56 of column 21 of Finn, Finn teaches:

> "....If in decision block 70 decision is made that the cycle and path above do not include all nodes of the graph, then processing proceeds to steps 72-78 and another path is again constructed starting on some node already included, passing through one or more nodes not included, and then ending on another already included node...."

This passage of Finn appears to teach nothing more than constructing a path starting on an "included" node, passing through a "not included" node, and ending on another "included" node. Finn seems to teach that a path is constructed to pass through an unincluded node between two already included nodes. There is no teaching of blocking any nodes or, further, of blocking nodes that are ultimately to be included in a path.

     Lines 5-9 of column 22 of Finn read as follows:

> "....Decision block 80 implements a loop to continue the processing in steps 72-78 such that the technique continues to add new nodes until all nodes which are desired to be included are included....."

This passage of Finn teaches of including all nodes which are desired in a path. There is no teaching of blocking nodes that are ultimately to be included in a path to prevent those nodes from being included in particular segments.

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Finn does not teach that a first segment of a path which includes a third element is computed while a fourth element is blocked from being included in the first segment, or that a second segment of the path which includes the fourth element is computed while the third element is blocked from being included in the second segment. Finn appears to teach of making certain that all desired nodes are included in a path, but fails to teach blocking some of the desired nodes such that specific desired nodes are prevented from being in certain path segments.

In other passages and figures of Finn, as cited by the Examiner on page 4 of the Office Action dated June 1, 2005, Finn appears to teach of eliminating edges (see, *e.g.*, column 18 at lines 10-12 and FIG. 2). However, this elimination of edges, as well as failures of nodes, is not related to the routing of a path. Rather, Finn appears to teach that when an edge is eliminated or a node fails, paths are such that a secondary path may be used in lieu of a primary path. Additionally, while certain nodes are shown in FIG. 2 of not being included in certain arcs/paths, there is no teaching or suggestion that these nodes were in fact blocked from being included in particular arcs/paths. A node not being included in a particular arc does not inherently mean that the node was blocked from being in the arc. The Applicants submit that Finn does not teach, or even remotely suggest, that a first segment of a path (which includes a third element) is computed while a fourth element is blocked from being included, or that a second segment of the path (which includes the fourth element) is computed while the third element is blocked from being included. As such, claim 1 and its dependents are each believed to be allowable over Finn for at least this reason.

Claim 10 recites similar limitations as recited in claim 1. Therefore, claim 10 and its dependents are each believed to be allowable for at least the reason cited above with respect to claim 1.

2.   *Independent claims 8, 14, and their respective dependents*

Independent claim 8 recites a device for creating a path between a first element and a second element that includes components of a third element and a fourth element. The device

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includes computer code for implementing a second mechanism that causes a path between the first and second elements to traverse a third element to be computed and also causes a segment associated with the third element as well as a segment associated with the fourth element to be computed. The fourth element is arranged to be traversed after the third element. A third mechanism causes the fourth element and the second element to be prevented from being included in the first segment associated with the first element and the third element. The third mechanism also prevents the first element and the second element from being included in the second segment.

Claim 8 requires that a fourth element, which is traversed after a third element in a path, is prevented from being included in a segment associated with the third element. In other words, a fourth element which is to be included in a segment of a path is blocked from being included in a segment that is traversed before the segment which includes the fourth element is traversed. Hence, an element that is to be included in a path is prevented from being included in a particular segment of the path before the segment that includes that element is computed.

The Examiner has argued, on pages 13-14 of the Office Action dated June 1, 2005, that Finn in view of Doshi teaches the limitations of claim 8. The Applicants respectfully disagree, and submit that Finn does not teach of preventing an element which is to be included in a path from being included in a first segment of the path that is traversed before a second segment that is to include the element. Finn appears to teach of making certain that all desired nodes are included in a path, but fails to teach preventing a desired node from being included in a path segment that is to be traversed before a path segment that is to include the node is traversed.

Doshi does not overcome the deficiencies of Finn. The Examiner has stated, on page 14 of the Office Action dated June 1, 2005, that Finn does not explicitly disclose further arranging and preventing. In his arguments, the Examiner states that Doshi teaches of a mechanism that is "arranged to substantially prevent the segment/path/node." While the Examiner's wording is somewhat unclear, it is noted that the figure and passages in Doshi that were cited by the Examiner, Doshi appears to lock out demands on a primary path. It is respectfully submitted that

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locking out demands on existing paths is not the same as, and does not reasonably suggest, preventing an element from being included in a particular segment of a path. A combination of Finn and Doshi, at best, would appear to teach locking out demands on primary paths created using the methods taught by Finn. Therefore, claim 8 and its dependent are each believed to be allowable for the reasons set forth.

The Examiner has noted that he believes "... assigning and preventing path/segment/node does not define patentable distinct invention ... the degree in which determining how path/segment are created presents no new or unexpected results..." The Applicants respectfully submit that the inventive aspects of claim 8 enable a path to be created that allows certain elements to be included in certain segments of the path, and prevents those elements from first being included in other segments of the path. It is believed that this aspect of claim 8 is a new results when compared with a combination of Finn and Doshi.

Claim 14 recites similar limitations as recited in claim 8. Therefore, claim 14 and its dependent are both believed to be allowable over the cited art for at least the reasons cited above with respect to claim 8.

3.   Independent claim 16 and its dependent

Independent claim 16 recites an apparatus for routing a path between a source node and a destination node which includes a blocker for blocking a first element from being used in generating a first segment of a path and for blocking a second element from being used in generating a second segment of the path. The apparatus also includes a path router that generates the first segment to include the source node and the second element but not the first element. The path router also generates the second segment to include the first element. As amended, claim 16 requires that the second segment is generated after the first segment is generated. Hence, the first element is a component to be used in a path, but is blocked from being used when a first segment is generated. When a second segment is generated after the first segment is generated, the second segment is generated to include the previously blocked first element.

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It is respectfully submitted that not including certain nodes and their arcs, as argued by the Examiner on page 9 of the Office Action dated June 1, 2005, is not equivalent to blocking nodes and their arcs. Blocking an element is not equivalent to not selecting an element. While an element that is not included in a path segment is available for selection for use in the path segment, a blocked element is not available. Finn does not teach or suggest that certain nodes and their arcs should be blocked. Rather, some nodes and their arcs may not be included in a segment of a path simply because those nodes and arcs, while available, are not selected. Not selecting an element that is available is not the same as blocking the element from being selected. As such, claim 16 and its dependent are believed to be allowable for at least this reason.

The Examiner repeatedly refers to FIG. 2 of Finn as showing aspects of claim 16. FIG. 2 shows a graph that includes a source node and a destination node that are connected by a pair of redundant trees that includes arcs (Finn, column 18 at lines 1-5). There is no discussion of blocking any of the links or nodes of FIG. 2 to generate the trees. Instead, Finn only appears to teach of including nodes which were not previously included when a tree is generated (Finn, column 21 at lines 10-56).

The Applicants submit that Finn does not teach of generating a second segment after a first segment is generated such that a first element that was blocked from being included in the first segment is included in the second segment. Therefore, claim 16 and its dependent are believed to be allowable over Finn for at least this reason as well.

4.   *Independent claims 25, 35, and their respective dependents*

Independent claim 25 recites a method of computing a circuit path that includes blocking a second element of a path from being available for use in routing a first segment of a path, then unblocking the second element such that it is available for use in routing a second segment of the path.

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The Examiner has acknowledged on page 26 of the Office Action dated June 1, 2005, that Finn does not disclose unblocking. However, the Examiner has argued that Doshi somehow teaches of unblocking a second element such that it is available for use in routing a second segment of a path. The Applicants respectfully disagree with the Examiner's statements. In the figure and passages in Doshi that were cited by the Examiner, Doshi teaches of locking out demands on a primary path that already exists. It is respectfully submitted that locking out demands on existing paths is not the same as, and does not reasonably suggest, preventing an element from being included in a particular segment of a path that is being computed. While Doshi does mention removing nodes, links, and spans of a primary path from consideration in a path search (Doshi, column 12 at lines 13-16), the "path search" is for an alternate path to the primary path. In other words, Doshi does not teach or suggest removing nodes, links, and spans of a given path to enable segments of the given path to be computed. As such, Doshi does not overcome the deficiencies of Finn. Therefore, claim 25 and its dependents are believed to be allowable over Finn and Doshi for at least the reasons set forth.

Claim 37 recites similar limitations as recited in claim 25. As such, claim 37 and its dependent are both believed to be allowable over a combination of Finn and Doshi for at least the reasons set forth with respect to claim 25.

5.   *Independent claims 21, 33, and their respective dependents*

Independent claim 21 recites that a circuit path is computed by identifying a first element that is to be traversed the circuit path between a source node and a destination node. As amended, claim 21 requires identifying a second element that is to be traversed by the circuit path, and blocking the second element from being available for use in routing a first segment of the circuit path. The second element is intended to be part of a circuit path that is traversed between a first element and a destination node. (The first element is traversed between a source node and the destination node.)

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The Examiner has argued, on page 23 of the Office Action dated June 1, 2005, that Finn teaches that a segment is routed to not automatically include a particular node and, that by not including the particular node, blocking of the node is somehow taught. It is respectfully submitted that a node not being included in a segment is not equivalent to a node being blocked from being included. Blocking an element, which is intended to be in a path, from being included in a first segment of the path makes that element unavailable for use in routing the first segment. It is respectfully submitted that Finn does not teach of any nodes being unavailable, only that certain available nodes are not included. Hence, Finn does not teach of a second element that is intended to be part of a circuit path being blocked or unavailable for use in routing a first segment of the path. Finn only teaches that an element may not necessarily be included in a particular segment of a path, and does not even suggest blocking the element from being included. Therefore, claim 21 is believed to be allowable over Finn for at least this reason.

Claims 24, 28-30, 32, and 44 each depend either directly or indirectly from claim 21 and are, therefore, each believed to be allowable over the cited art for at least the reason set forth above with respect to claim 21. Each of these dependent claims recites additional limitations which, when considered in light of claim 21, are believed to further distinguish the claimed invention over the cited art. By way of example, claim 44 requires that blocking a second element from being available for use in routing a first segment automatically includes placing the second element in a list of elements that are arranged to be eliminated from consideration in routing the first segment of a path. The cited art does not teach of placing an element in a list of elements that are arranged to be eliminated from consideration in routing a first segment of a path when blocking that element. Therefore, claim 44 is believed to be allowable for at least this additional reason as well.

As amended, independent claim 33 recites similar limitations to those recited in claim 21. Accordingly, claim 33 and its dependents are each believed to be allowable over Finn in view of Doshi for at least the reasons set forth with respect to claim 21.

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<div align="center">Conclusion</div>

For at least the foregoing reasons, the Applicants believe all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 868-4096.

Respectfully submitted,
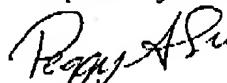
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